WHAT IS CLAIMED IS:

1. A method for RTP header suppression in a cable modem system, comprising the steps of:

(a) sending an index number to a receiver, wherein said index number represents an RTP header suppression technique;

(b) sending rules associated with said RTP header suppression technique;

(c) transmitting at least one complete RTP packet;

(d) transmitting subsequent RTP packets in an RTP stream, wherein said subsequent RTP packets are comprised of delta values representing fields that dynamically change from packet to packet in an RTP data packet.

2. The method of claim 1, wherein said at least one complete RTP packet is learned for reconstructing said subsequent RTP packets at the receiver.

3. The method of claim 1, wherein step (c) is repeated until the receiver has learned said at least one complete RTP packet.

4. The method of claim 1, wherein said delta values include a delta RTP sequence value and a delta RTP timestamp value.

5. The method of claim 1, wherein said subsequent RTP packets further comprise an RTP payload.

6. The method of claim 1, wherein said subsequent RTP packets further comprise an additional byte indicating a low-order byte of an RTP sequence number, wherein said low-order byte of said RTP sequence number is used to recover lost RTP packets.

7. The method of claim 1, wherein changing RTP fields in a data stream are suppressed.

8. A method for suppressing an RTP header, comprising the steps of:

(a) determining a delta value for an RTP timestamp value between two consecutive RTP packets;

(b) determining a delta value for an RTP sequence number between two consecutive RTP packets;

(c) determining whether proper reconstruction of said RTP header will occur;

(d) if proper reconstruction of said RTP header will not occur, then setting a learn bit to enable a receiver to learn said RTP header and sending a complete RTP packet, a control value, and said delta value for said RTP timestamp value upstream to be learned by the receiver; and

(e) if proper reconstruction of said RTP header will occur, then sending upstream said control value and said RTP timestamp value for reconstruction of said RTP data packets at the receiver.

9. The method of claim 8, wherein said control value comprises said learn bit, two bits for determining whether to increment IP packet ID field of RTP header by one of 0x0001 and 0x0100, and five-bits for said delta value for said RTP sequence number.

10. The method of claim 8, wherein step (c) further comprises the steps of determining whether a previous RTP timestamp, said delta value for said RTP sequence number and a codec value will generate a current timestamp value.

11. A method for reconstructing a suppressed RTP data packet at a receiving end, comprising the steps of:

(a) reading a first 54-byte RTP header from an input stream;

(b) reading a contol byte from said input stream;

(c) examining a first bit from said control byte to determine whether a learn bit has been set;

(d) if said learn bit has been set, then reading and discarding a byte of data from said input stream, discarding said first 54-byte RTP header from step (a), and reading a second 54-byte RTP header from said input stream, wherein said first 54-byte RTP header is generated by a payload header suppression mechanism and said second 54-byte RTP header is transmitted upstream; and

(e) if said learn bit has not be set, then reconstructing said 54-byte RTP header using said delta values.

12. A computer program product comprising a computer useable medium including control logic stored therein, said control logic for enabling RTP header suppression in a cable modem system, said control logic comprising:

first sending means for enabling a processor to send an index number to a receiver, wherein said index number represents an RTP header suppression technique;

second sending means for enabling a processor to send rules associated with said RTP header suppression technique;

first transmitting means for enabling a processor to transmit at least one complete RTP packet; and

second transmitting means for enabling a processor to transmit subsequent RTP packets in an RTP stream, wherein said subsequent RTP packets are comprised of delta values representing fields that dynamically change from packet to packet in an RTP data packet.

13. The computer program product of claim 12, wherein said at least one complete RTP packet is learned for reconstructing said subsequent RTP packets at the receiver.

14. The computer program product of claim 12, wherein said first transmitting means continues to transmit until the receiver has learned said at least one complete RTP packet.

15. The computer program product of claim 12, wherein said delta values include a delta RTP sequence value and a delta RTP timestamp value.

16. The computer program product of claim 12, wherein said subsequent RTP packets further comprise an RTP payload.

17. The computer program product of claim 12, wherein said subsequent RTP packets further comprise an additional byte indicating a low-order byte of an RTP sequence number, wherein said low-order byte of said RTP sequence number is used to recover lost RTP packets.

18. The computer program product of claim 12, wherein changing RTP fields in a data stream are suppressed.

19. A computer program product comprising a computer useable medium including control logic stored therein, said control logic for enabling the suppression of an RTP header, said control logic comprising:

first determining means for enabling a processor to determine a delta value for an RTP timestamp value between two consecutive RTP packets;

second determining means for enabling a processor to determine a delta value for an RTP sequence number between two consecutive RTP packets;

third determining means for enabling a processor to determine whether proper reconstruction of said RTP header will occur;

setting means for enabling a processor to set a learn bit to enable a receiver to learn said RTP header and sending means for enabling a processor to send a complete RTP packet, a control value, and said delta value for said RTP

timestamp value upstream to be learned by the receiver, if proper reconstruction of said RTP header will not occur; and

sending means for enabling a processor to send upstream said control value and said RTP timestamp value for reconstruction of said RTP data packets at the receiver, if proper reconstruction of said RTP header will occur.

20. The computer program product of claim 19, wherein said control value comprises said learn bit, two bits for determining whether to increment IP packet ID field of RTP header by one of 0x0001 and 0x0100, and five-bits for said delta value for said RTP sequence number.

21. The computer program product of claim 19, wherein said third determining means further comprises means for enabling a processor to determine whether a previous RTP timestamp, said delta value for said RTP sequence number and a codec value will generate a current timestamp value.

22. A computer program product comprising a computer useable medium including control logic stored therein, said control logic for enabling the reconstruction of a suppressed RTP data packet at a receiving end, said control logic comprising:

first reading means for enabling a processor to read a first 54-byte RTP header from an input stream;

second reading means for enabling a processor to read a control byte from said input stream;

examining means for enabling a processor to examine a first bit from said control byte to determine whether a learn bit has been set;

reading and discarding means for enabling a processor to read and discard a byte of data from said input stream, discarding means for enabling a processor to discard said first 54-byte RTP header, and third reading means for enabling a processor to read a second 54-byte RTP header from said input stream, if said

learn bit has been set, wherein said first 54-byte RTP header is generated by a payload header suppression mechanism and said second 54-byte RTP header is transmitted upstream; and

reconstructing means for enabling a processor to reconstruct said 54-byte RTP header using said delta values, if said learn bit has not be set.